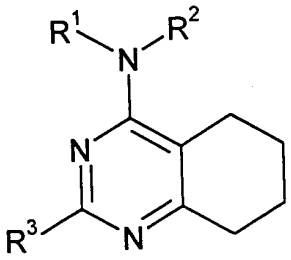
We claim:

1. A compound of formula I:



I

wherein

R^1 and R^2, which are selected independently of one another and which may be identical or different, are hydrogen, or are (C_1-C_{10})-alkyl optionally substituted by one or more identical or different substituents selected from hydroxy, (C_1-C_4)-alkoxy, (C_1-C_4)-alkyl-$S(O)_m$-, (C_3-C_7)-cycloalkyl, phenyl, naphthyl, and pyridyl, or are (C_3-C_9)-cycloalkyl which can be substituted by one or more identical or different substituents selected from (C_1-C_4)-alkyl, benzyl, hydroxy, amino, H-CO-O-, (C_1-C_4)-alkyl-CO-O-, (C_1-C_4)-alkyl-O-CO-O-, H-CO-NH-, (C_1-C_4)-alkyl-CO-NH-, (C_1-C_4)-alkyl-O-CO-NH-, phenyl-CO-NH-, (C_1-C_4)-alkyl-SO_2-NH-, and phenyl-SO_2-NH-, or are a residue of a 5-membered to 7-membered saturated heterocyclic ring which contains one or two identical or different heteroatom ring members selected from O, NR^{10}, and $S(O)_m$ and is optionally substituted by one or more identical or different substituents selected from (C_1-C_4)-alkyl, hydroxy, and aryl-(C_1-C_4)-alkyl-, with the exception that R^1 and R^2 cannot simultaneously be hydrogen,

or

the residue R^1R^2N- is a residue of a 5-membered to 7-membered saturated heterocyclic ring bonded via a ring nitrogen atom which in addition to the nitrogen atom bonded to the tetrahydroquinazoline ring can contain one further heteroatom ring member selected from O and $S(O)_m$, optionally substituted by one or more identical or different substituents selected from (C_1-C_4)-alkyl, phenyl, hydroxy, (C_1-C_4)-alkoxy, hydroxy-(C_1-C_4)-alkyl-, and $R^{11}R^{12}N$-,

wherein phenyl groups, naphthyl groups, pyridyl groups, and benzyl groups present in R^1, R^2, and R^1R^2N- can be unsubstituted or substituted on the aromatic ring by one or more identical or different substituents selected from halogen, (C_1-C_4)-alkyl, phenyl, CF_3, NO_2, OH, -O-(C_1-C_4)-alkyl, -O-(C_2-C_4)-alkyl-O-(C_1-C_4)-alkyl, (C_1-C_2)-alkylenedioxy, NH_2, -NH-(C_1-C_4)-alkyl, -N((C_1-C_4)-alkyl)$_2$, -NH-CHO, -NH-CO-(C_1-C_4)-alkyl, CN, -CO-NH_2, -CO-NH-(C_1-C_4)-alkyl, -CO-N((C_1-C_4)-alkyl)$_2$, -CO-OH, -CO-O-(C_1-C_4)-alkyl, -CHO, and -CO-(C_1-C_4)-alkyl;

R^3 is aryl, but cannot be unsubstituted phenyl;

R^{10} is hydrogen, (C_1-C_4)-alkyl, aryl-(C_1-C_4)-alkyl-, hydroxy-(C_1-C_4)-alkyl-, hydroxycarbonyl-(C_1-C_4)-alkyl-, ((C_1-C_4)-alkoxycarbonyl)-(C_1-C_4)-alkyl-, $R^{11}R^{12}N$-CO-(C_1-C_4)-alkyl-, R^{13}-SO_2-, or aryl;

R^{11} and R^{12} are identical or different residues selected from hydrogen and (C_1-C_4)-alkyl;

R^{13} is (C_1-C_4)-alkyl, aryl, or $R^{11}R^{12}N$-;

aryl is phenyl, naphthyl, or heteroaryl which are optionally substituted by one or more identical or different substituents selected from halogen, (C_1-C_4)-alkyl, phenyl, CF_3,

NO_2, OH, -O-(C_1-C_4)-alkyl, -O-(C_2-C_4)-alkyl-O-(C_1-C_4)-alkyl, (C_1-C_2)-alkylenedioxy, NH_2, -NH-(C_1-C_4)-alkyl, -N((C_1-C_4)-alkyl)$_2$, -NH-CHO, -NH-CO-(C_1-C_4)-alkyl, CN, -CO-NH_2, -CO-NH-(C_1-C_4)-alkyl, -CO-N((C_1-C_4)-alkyl)$_2$, -CO-OH, -CO-O-(C_1-C_4)-alkyl, -CHO, and -CO-(C_1-C_4)-alkyl;

heteroaryl is a residue of a monocyclic 5-membered or 6-membered aromatic heterocycle or of a bicyclic 8-membered to 10-membered aromatic heterocycle, each of which containing one or more identical or different ring heteroatoms selected from N, O, and S; and

m is 0, 1, or 2,

in any stereoisomeric form, or mixtures thereof in any ratio, or their physiologically acceptable salts.

2. A compound of formula I as claimed in claim 1, wherein

one of the residues R^1 and R^2 is (C_1-C_8)-alkyl optionally substituted by one or more identical or different substituents selected from hydroxy, (C_1-C_4)-alkoxy, (C_1-C_4)-alkyl-S(O)$_m$-, (C_3-C_7)-cycloalkyl, phenyl, and naphthyl, or is (C_3-C_9)-cycloalkyl which can be substituted by one or more identical or different substituents selected from (C_1-C_4)-alkyl, benzyl, hydroxy, amino, H-CO-O-, (C_1-C_4)-alkyl-CO-O-, (C_1-C_4)-alkyl-O-CO-O-, H-CO-NH-, (C_1-C_4)-alkyl-CO-NH-, (C_1-C_4)-alkyl-O-CO-NH-, phenyl-CO-NH-, (C_1-C_4)-alkyl-SO_2-NH-, and phenyl-SO_2-NH-,

and the other of the residues R^1 and R^2 is hydrogen, or is (C_1-C_8)-alkyl optionally substituted by one or more identical or different substituents selected from hydroxy, (C_1-C_4)-alkoxy, (C_1-C_4)-alkyl-S(O)$_m$-, (C_3-C_7)-cycloalkyl, phenyl, and naphthyl, or is (C_3-C_9)-cycloalkyl optionally substituted by one or more identical or different

substituents selected from (C_1-C_4)-alkyl, benzyl, hydroxy, amino, H-CO-O-, (C_1-C_4)-alkyl-CO-O-, (C_1-C_4)-alkyl-O-CO-O-, H-CO-NH-, (C_1-C_4)-alkyl-CO-NH-, (C_1-C_4)-alkyl-O-CO-NH-, phenyl-CO-NH-, (C_1-C_4)-alkyl-SO_2-NH-, and phenyl-SO_2-NH-, wherein phenyl groups, naphthyl groups and benzyl groups present in R^1 and R^2 can be unsubstituted or substituted on the aromatic ring,

or R^1R^2N- is a residue of a 5-membered, 6-membered, or 7-membered saturated heterocyclic ring bonded via a ring nitrogen atom which, in addition to the nitrogen atom bonded to the tetrahydroquinazoline ring, may optionally contain one oxygen atom or one group $S(O)_m$ as a further heteroatom ring member and is optionally substituted by one or more identical or different substituents selected from (C_1-C_4)-alkyl, hydroxy, (C_1-C_4)-alkoxy, hydroxy-(C_1-C_4)-alkyl-, and $R^{11}R^{12}N$-,

in any stereoisomeric form, or mixtures thereof in any ratio, or their physiologically acceptable salts.

3. A compound of formula 1 as claimed in claim 1, wherein

one of the residues R^1 and R^2 is (C_1-C_4)-alkyl, optionally substituted by one or more identical or different substituents selected from hydroxy, (C_1-C_4)-alkoxy, (C_1-C_4)-alkyl-$S(O)_m$-, (C_3-C_7)-cycloalkyl, phenyl and naphthyl, or is (C_3-C_9)-cycloalkyl which can be substituted by one or more identical or different substituents from the group consisting of (C_1-C_4)-alkyl, benzyl, hydroxy, amino, H-CO-O-, (C_1-C_4)-alkyl-CO-O-, (C_1-C_4)-alkyl-O-CO-O-, H-CO-NH-, (C_1-C_4)-alkyl-CO-NH-, (C_1-C_4)-alkyl-O-CO-NH-, phenyl-CO-NH-, (C_1-C_4)-alkyl-SO_2-NH-, and phenyl-SO_2-NH-,

and the other of the residues R^1 and R^2 is hydrogen or is (C_1-C_4)-alkyl, optionally substituted by one or more identical or different substituents selected from hydroxy, (C_1-C_4)-alkoxy, (C_1-C_4)-alkyl-$S(O)_m$-, (C_3-C_7)-cycloalkyl, phenyl, and naphthyl, wherein phenyl groups, naphthyl groups, and benzyl groups present in R^1 and R^2 can be unsubstituted or substituted on the aromatic ring,

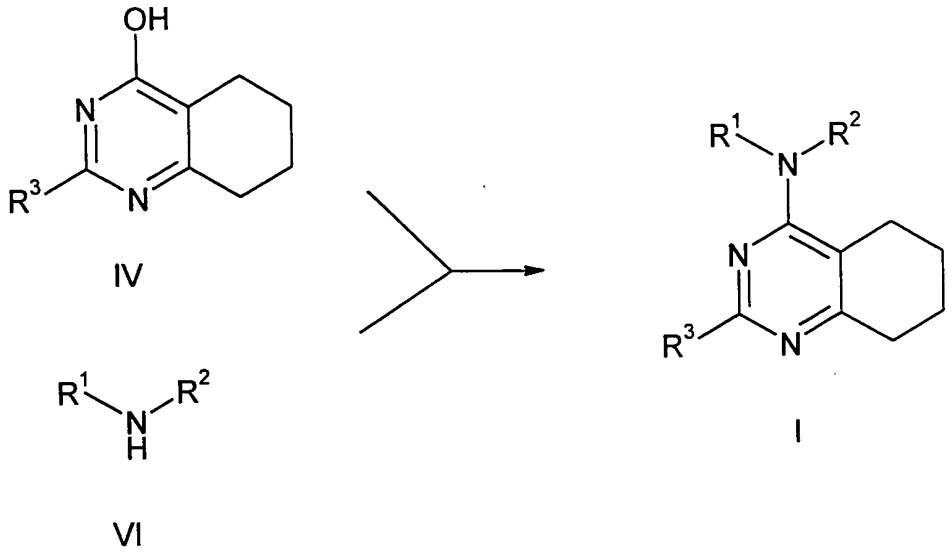
in any stereoisomeric form, or mixtures thereof in any ratio, or their physiologically acceptable salts.

4. A compound of formula I as claimed in claim 1, wherein one of the residues R^1 and R^2 is $(C_3$-$C_9)$-cycloalkyl, optionally substituted by one or more identical or different substituents selected from $(C_1$-$C_4)$-alkyl, benzyl, hydroxy, amino, H-CO-O-, $(C_1$-$C_4)$-alkyl-CO-O-, $(C_1$-$C_4)$-alkyl-O-CO-O-, H-CO-NH-, $(C_1$-$C_4)$-alkyl-CO-NH-, $(C_1$-$C_4)$-alkyl-O-CO-NH-, phenyl-CO-NH-, $(C_1$-$C_4)$-alkyl-SO_2-NH-, and phenyl-SO_2-NH-, phenyl groups and benzyl groups present in R^1 and R^2 may be unsubstituted or substituted on the aromatic ring, and the other of the residues R^1 and R^2 is hydrogen,
in any stereoisomeric form, or mixtures thereof in any ratio, or their physiologically acceptable salts.

5. A compound of formula I as claimed in claim 1, wherein R^1R^2N- is a residue selected from piperidino, morpholino, and thiomorpholino, including the S-oxide and S,S-dioxide of thiomorpholino,
in any stereoisomeric form, or mixtures thereof in any ratio, or their physiologically acceptable salts.

6. A compound of formula I as claimed in claim 1, wherein R^3 is substituted phenyl, in any stereoisomeric form, or mixtures thereof in any ratio, or their physiologically acceptable salts.

7. A process for the preparation of a compound of formula I as claimed in claim 1, comprising activating a 4-hydroxytetrahydroquinazoline of formula IV and reacting it with an amine of formula VI,



wherein R^1, R^2, and R^3 have the meanings indicated in claim 1.

8. A pharmaceutical composition, comprising at least one compound of formula I as claimed in claim 1 and a physiologically acceptable carrier.

9. A method for activating at least one soluble guanylate cyclase, comprising adding at least one compound of formula I as claimed in claim 1 to said at least one soluble guanylate cyclase.

10. A method for treating or preventing at least one disorder associated with a disturbed balance selected from endothelial dysfunction, diastolic dysfunction, atherosclerosis, hypertension, angina pectoris, thrombosis, restenosis, myocardial infarct, stroke, cardiac insufficiency, pulmonary hypertension, erectile dysfunction, bronchial asthma, chronic renal insufficiency, diabetes, liver cirrhosis, and for improving restricted learning capacity or memory power, comprising administering an effective amount of at least one compound of formula I as claimed in claim 1 to a patient in need thereof.